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IN THE CLAIMS

Please amend claims 26 and 32 as follows and add new claims 42-44 as follows:

Claims 1-16 (Canceled).

17. (Previously presented) An x-ray anode for microfocus sources comprising:
a diamond window having a thickness in a range of 300 μm to 2000 μm ;
an anode material being located on said diamond window.

18. (Previously presented) The x-ray anode in accordance with claim 17, wherein said diamond window comprises a polychrystalline diamond window.

19. (Previously presented) The x-ray anode in accordance with claim 17, wherein said diamond window is a monocrystal.

20. (Previously presented) The x-ray anode in accordance with claim 17, wherein said anode material comprises at least one of a metal, an alloy, and a plurality of layers of metal.

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anode material has a thickness between 1 μm and 25 μm .

22. (Previously presented) The x-ray anode in accordance with claim 17, wherein said anode material has a thickness between 3 μm and 12 μm .

23. (Previously presented) The x-ray anode in accordance with claim 17, wherein said anode material has a thickness of 6 μm .

24. (Previously presented) The x-ray anode in accordance with claim 17, wherein said anode material at least partially covers said diamond window.

25. (Previously presented) The x-ray anode in accordance with claim 17, wherein said anode material completely covers a surface of said diamond window.

26. (Currently Amended) The x-ray anode in accordance with claim 17, wherein said anode material only partially covers a surface of said diamond window.

27. (Previously presented) The x-ray anode in accordance with claim 17, further

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window.

28. (Previously presented) The x-ray anode in accordance with claim 27, wherein said intermediate layer comprises an adhesion-promoting layer.

29. (Previously presented) The x-ray anode in accordance with claim 27, wherein said intermediate layer comprises a radiation filter.

30. (Previously presented) The x-ray anode in accordance with claim 17, further comprising a temperature sensor.

31. (Previously presented) The x-ray anode in accordance with claim 17, wherein said diamond window is structured and arranged as a temperature sensor.

32. (Currently Amended) The x-ray anode in accordance with claim 17, wherein said x-ray anode is structured and arranged for use in an x-ray ~~microscopes~~ microscope.

33. (Previously presented) The x-ray anode in accordance with claim 17, wherein said

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34. (Previously presented) The x-ray anode in accordance with claim 17, wherein said anode material comprises tungsten.

35. (Previously presented) The x-ray anode in accordance with claim 17, wherein said anode material is located on said diamond window by physical vapor deposition.

36. (Previously presented) The x-ray anode in accordance with claim 17, wherein said diamond layer is formed on an auxiliary substrate by chemical vapor deposition.

37. (Previously presented) An x-ray anode formed by a process comprising:
locating an anode material on a diamond window having a thickness in a range of 300 μm to 2000 μm .

38. (Previously presented) The x-ray anode in accordance with claim 37, wherein said anode material is located on said diamond window by physical vapor deposition.

39. (Previously presented) The x-ray anode in accordance with claim 37, wherein, before the anode material is located on said diamond window, said process further comprises:

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auxiliary substrate; and

removing the auxiliary substrate from the diamond window.

40. (Previously presented) The x-ray anode in accordance with claim 39, wherein said polycrystalline diamond layer is deposited on said auxiliary substrate by chemical vapor deposition.

41. (Previously presented) The x-ray anode in accordance with claim 37, wherein said anode layer at least partially covers a surface of said diamond window.

42. (New) A method of making an x-ray anode, the method comprising:
forming a diamond window with a thickness of between 300 μm to 2000 μm , wherein the diamond window includes an inner surface and an outer surface; and
applying an anode material onto at least a portion of the inner surface.

43. (New) The method of claim 42, wherein, before the applying, the method further comprises applying an intermediate layer onto said diamond window.

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promoting intermediate layer.